

Informatics in Medical Education at Brown University

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The Program in Liberal Medical Education at Brown University is an eight year combined program leading to both an undergraduate degree, and a Medical Doctorate. The third year medical class is made up of these 8 year students, some students that transfer from Dartmouth for their clinical training, and a smaller group of older post-baccalaureate students, usually from Columbia or Bryn Mawr's program. Students at Brown University have access to a Computer Information Services facility which houses the main servers for the campus-based computer network. Within this building are resources for student use including word processing, spreadsheets, and presentation software, computer-based learning, and email and World Wide Web access. It houses approximately 400 computers for student access, as well as providing the connectivity for clusters throughout the campus and via modem.

Medical students at Brown, however, have noticed several problems with the CIS and its resources. During the first two years of medical school, most courses are taught in the Biomedical Center Building on the main campus. Few faculty use computers to enhance student learning, or to facilitate communication between themselves and their students. The Biomedical Center itself has 15 assorted most obsolete computers available for student use, of which only a few are completely linked to the local Brown network. This situation has been in place for several years, and improvement of this situation is not considered a priority by the University, since the proportion of medical students to total students is relatively small (60-70 medical students per class, or 10-15% of the total student body). This lack of resources and the perceived attitude by the university provides little incentive for students or faculty to learn or maintain computer skills.

The third and fourth year medical students spend nearly all of their time at the local hospitals doing their required rotations. This gives them a unique status. On-campus facilities such as Computer Information Services no longer consider these students a part of the Brown community, and thus there has been no effort to allocate scarce funds to promote connectivity between the main campus and the local hospitals. Students and

the Medical School object to this point of view, but the reality is that each hospital has the responsibility to provide student access to whatever computer system is available. At this time, other than systems for obtaining laboratory results, there is very little computer access back to Brown for students who are located off-campus. Thus medical students that have developed their computer competency are not using those skills, and the medical community is demonstrating to these doctors-in-training that we do not feel that computers are useful and important in our day-to-day lives.

The new Clerkship in Family Medicine includes a 4 hour workshop to learn rudimentary skills in word processing, email, World Wide Web access and information retrieval, and electronic presentations. Apple/Macintosh computers are used at the Computer Information Services Building on the main campus, however students can and have used IBM-based machines also. Since this clerkship is brand new, it seemed an ideal time to survey the students, prior to the four hour workshop on informatics, about their perceptions of the utility and usefulness of computers, as well as how comfortable they are with computers in general. During this past academic year (August 1995 - July 1996), 57 of the 62 students who participated in the Family Medicine Required Clerkship completed the questionnaire.

Results to date indicate that students use computers mainly for word processing. They either used email often, or hardly at all. Although they felt knowledgeable about spreadsheets and presentation software, they had doubts about their competency and were uncomfortable using these programs. Most students used computers both for work and for play, felt that they are not difficult to learn, and believed that computer skills should be taught to all physicians. However, many thought that our four hour mini-course would be enough!

Data are continuing to be collected, and preliminary results from the beginning of academic year 1996-97 will be included. One-year follow-up data from graduates of the clerkship, if available, will be presented as well.